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PEST SPECIMENS FROM A FOREST REFERENCE STAND IN YOSEMITE NATIONAL PARK

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This report discusses the insects and fungi associated with four tree specimens submitted to the the Forest Pest Management Shared Service Area office in Sonora, California. The speicmens were collected at a mixed conifer forest reference stand at an elevation of approximately 5,000 feet in Yosemite National Park

Three of the four samples appear related to the condition called "sooty mold". Sooty molds are dark colored fungi that grow on the "honeydew" excrement of insects such as aphids and scales. In the Sierra Nevada, the incense-cedar scale, Xylococculus macrocarpae, typically feeds under the bark on the bole and and upper branches of incense-cedars. Sooty mold fungi will grow wherever honeydew from scale insects accumulates. In dense forest stands these fungi cause the bark of suppressed incense-cedars to turn black, which may give the appearance that the trees were scorched by fire.

Sooty mold fungi are not harmful to trees unless they become so heavy on foliage that they impair the trees ability to photosynthesize. Because these fungi are not parasitic, they have not received much attention by California forest pathologists. Several species of dark colored ascomycetes and imperfect fungi have been described as causing sooty mold on a variety of hosts, including the genera Capnodium, Dimerosporium, Adelopus, Dimeriella. The fungus associated with incense cedar sooty mold is Arthrobotryum spongiosum.

The underlying infestation of scale insects is, however, a direct threat to tree vigor. Incense-cedar mortality due to the bark scale has not been characterized, and the most heavily infested trees are usually suppressed trees with already low vigor.

Specimen No. 1. A suspected wood decay fungi conk on the lower bole of tree #6977, a douglas-fir. The material was not a conk but a small mass of pitch covered with light sooty mold growth.

Specimen No. 2: Living foliage of tree #6488, an incense-cedar. The black specks on this foliage were small amounts of sooty mold.

Specimen No. 3: Tree #862, a dead incense-cedar branch with minute black fungal fruiting bodies growing on small twigs and foliage. The fungus was identified by the Plant Pest Diagnostics Center of the California Department of Food and Agriculture in Sacramento as Chloroscypha enterochroma (C. jacksoni). This genus is described as "apparently parasitic" but the pathogenicity of C. enterochroma has not been demonstrated; it is considered unimportant as a pathogen.

Specimen No. 4: Incense-cedar bark from tree #5437. The bark was black from sooty mold fungi, and the white material under the bark is produced by the incense-cedar scale.